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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,835	08/21/2003	Yu-Yu Chen	MR2863-127	6164
4586	7590	03/02/2006	EXAMINER	
ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			GEDEON, BRIAN T	
			ART UNIT	PAPER NUMBER
			3766	
DATE MAILED: 03/02/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/644,835

Applicant(s)

CHEN, YU-YU

Examiner

Brian T. Gedeon

Art Unit

3766

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karjalainen et al. (US Patent no. 6,715,812) in view of Chou et al. (US Patent no. 6,937,205).

In regards to claim 1, Karjalainen et al. telemetric heart rate measurement arrangement comprising a heart rate monitor 1 mounted to a belt A to wrap around the chest of a patient P, col 3 lines 49-53. The heart rate monitor 1 has multiple elements including amplifiers 12; an coil structure 14; data-processing unit 18, e.g., a microcomputer; and a memory unit 19, col 3 lines 1-5, which the Examiner interprets to be part of internal circuitry, such as on a circuit board. Heart rate measurement information is wirelessly transmitted to a receiver B than may be mounted on a watch, col 3 lines 29-48. The Examiner recognizes that the coil structure 14 is an equivalent to a transmission antenna. Karjalainen et al. however does not disclose that the antenna is shielded from interfering electromagnetic radiation. The device disclosed by Chou et al. has an integral structure that comprises a shielding cover 102, an antenna 101

soldered to a printed circuit board, col 2 lines 1-5, can avoid electromagnetic interferences and leakages. Further, there is a gap between the antenna 101 and the shield cover 102 of about 1.5 to 2.5 mm. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to shield the signal transmitting antenna because, regardless of the information transmitted, Chou et al. teaches that providing a shielding cover over an antenna and wireless circuitry to constrain the effects of electromagnetic interference can enhance signal transmission and receiving qualities and reduce the influences of electromagnetic waves to human bodies, col 1 lines 46-50.

In regards to claim 2, Karjalainen et al. substantially describes the claimed invention except for the use of an electromagnetic shielding plate that is connected to ground. Chou et al. describes the use of a shielding cover for wireless components with four feet 105 soldered to the printed circuit board as groundings, col 2 lines 46-52. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to ground the shielding cover to prevent excess charge from building up and having an adverse effect on the constrained electromagnetic interference waves.

In regards to claim 2, Karjalainen et al. substantially describes the claimed invention except for the use of an electromagnetic shielding plate and its structure. Chou et al. in figure 2 depicts the shielding cover 102 as being flat. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a flat shielding cover since it would have been a mere matter of design choice

due to the structure failing to solve a stated problem. *In re Kuhle*, 188 USPQ 7 (CCPA 1975).

In regards to claim 4, Karjalainen et al. substantially describes the claimed invention except for the use of an electromagnetic shielding plate and the "two downward extending wing portions at the corresponding ends of the shielding member." Chou et al. shows four feet 105 connected to the shielding cover 102 and soldered to the printed circuit board. The four feet 105 act as a source of grounding for the shield, a means of attachment of the shield to the printed circuit board, col 2 lines 46-48, and as shown in figures 2 and 3 to create space between the wireless components and the shield. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the use of "downward wings" or legs attached to the ends of the shield cover as a means of attachment to the printed circuit board.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Zhou et al. (US Patent no. 6,738,650) describes a device with radiation shielding tri-band antenna adapted to provide dual band polarization. Kolb et al. (US Patent no. 6,717,485) teaches the importance of using an electromagnetic shield around printed circuit boards. Rytty (US Patent no. 6,553,247) describes an electrode belt for measuring heart rate. Hoffmeister et al. (US Patent no. 6,542,125) describes a radio device with a completely shielded antenna. Nissila et al. (US Patent

no. 6,277,080) describes a belt with multiple physiological sensors and wireless transmission capabilities.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. Gedeon whose telephone number is (571) 272 3447. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert E. Pezzuto can be reached on (571) 272 6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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BTG